Remarks/Arguments

Applicants have carefully reviewed the Office Action mailed 24 September 2007 Finally Rejecting claims 1-12 currently pending in this application. To better point out and claim their invention so as to provide antecedent basis for the claimed elements, as well as to better distinguish their invention over the art of record, applicants have amended claims 1 and 7 as provided for under 37 C.F.R. 116(b). Reconsideration of the rejection of claims 1-12 is requested.

35 U.S.C. 103(a) Rejection of Claims 1-12

Claims 1-12 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent Application Publication 2003/0052841, published 20 March 2003 in the name of Yoshito Tanaka, in view of US Patent 5,371,515 issued 6 December 1994, in the name of Stuart Wells et al., further in view of U.S. Patent 6,646,625, issued 11 November 2003, in the name of Tetsuya Shigeta et al.

Before proceeding to address the examiner's rejection, applicants will briefly summarize their invention to better assist the examiner to appreciate the differences between applicants' claims and the art of record. Amended independent claims 1 and 7 recite a method and device, respectively, for processing video picture data for display on a display device. Applicants control the brightness of a pixel by at least one sub-field code with which the luminous element(s) undergo activation or remain inactivated for light output in small pulses corresponding to sub-fields in the video frame. The sub-fields have an assigned sub-field weight that determines the length of time the pixels for activation during the particular sub-field. The video picture data undergoes a transformation according to a retinal function before the dithering.

Through the use of the specific sub-field code for sub-field coding, the sub-field weights in the sub-field organization grow according to the inverse retinal function. In this way, a separate inverse transformation of the retinal function by means of look-up tables or algorithm, becomes unnecessary. This makes the process of the present

PAGE 5/8 * RCVD AT 12/26/2007 9:30:41 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/1 * DNIS:2738300 * CSID:609 734 6888 * DURATION (mm-ss):05-22

principles much easier to implement than other solutions, with a significantly lower expenditure for such implementation.

Applicants submit that the Tanaka et al. published application relates to a method of controlling the luminance of a Plasma Display Device (PDP) by varying the display luminance according to a luminance level. In particular, applicants' acknowledge that Tanaka teaches driving the device by dividing each field into sub-fields and weighting the sub-fields (See Paragraph [0101] at page 4 of the Tanaka et al. published patent application). However, Tanaka et al. fails to teach several features of applicants' amended claims 1 and 7 and the claims that depend therefrom.

As the examiner has acknowledged at page 4 of the Official action mailed 24 September 2007, the Tanaka et al. published application explicitly fails to teach applicants' features of:

> transforming said video picture data according to a retinal function; and
>
> dithering said video picture data.

The examiner has also explicitly acknowledged that the Tanaka et al. published application explicitly fails to teach applicants' feature of:

> growing the sub-field weights according to an-inverse of the retinal function, thereby integrating the inverse transformation of the dithered video picture data in a step of sub-field coding.

In an effort to overcome the deficiency of Tanaka et al. regarding dithering, the examiner relies on the Wells et al. patent. Applicants acknowledge that the Wells et al. patent teaches the desirability of dithering a video signal by simulating intensity levels between quantization levels to allow the eye to integrate fine detail within a given area and only record the overall intensity, rather than the intensity in discrete locations. However, the examiner should understand that applicants' are not claiming the notion of dithering *per se*, but rather, applicants make use of dithering as one of several steps in an overall method for processing video in a PDP type display.

PAGE 6/8 * RCVD AT 12/26/2007 9:30:41 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/1 * DNIS:2738300 * CSID:609 734 6888 * DURATION (mm-ss):05-22

Although the examiner has acknowledged the absence of any teaching in the Tanaka et al. patent of making use of an inverse of the retinal function for growing sub-fields, the examiner has said nothing concerning the Wells et al. patent in this regard. Applicants maintain that Wells et al. says nothing regarding the desirability of using an inverse retinal function, let alone for growing sub-fields. The examiner's silence in this regard only confirms the failure of the Wells et al. patent to provide such a teaching..

To overcome the acknowledged failure of Tanaka et al. and Wells et al. to teach applicants' feature of growing the sub-fields in according to an inverse of the retinal function, the examiner relies on the Shigeta et al. patent. The Shigeta et al. patent teaches a method for driving a plasma display panel by executing sub-fields for setting discharge cells to either a light emitting or dark state in response to pixel data, and for controlling the cells to emit light only during a light-emission period corresponding to each of weights assigned to a corresponding sub-field.

Contrary to the examiner's assertion, the Shigeta et al. patent contains no teaching or suggestion regarding the desirability of growing the sub-field weightings by an inverse of the retinal function. **Indeed, Shigeta et al. contains no mention of a retinal function, let alone the desirability of using an inverse for controlling sub-field weighting.** Further, the examiner's reliance on FIG. 30 of Shigeta et al. to suggest growing the sub-field weights similar to an inverse retinal function is misplaced. The table of FIG. 30 bears no resemblance to an exponential curve, let alone applicants' exponential curve of FIG. 17.

In summary, none of the Tanaka et al., Wells or Shigeta et al. references, teach or disclose applicants' feature of

> growing the sub-field weights according to an-inverse of the retinal function, thereby integrating the inverse transformation of the dithered video picture data in a step of sub-field coding.

Given that none of the references of record teach this element of applicants' claims 1 and 7, the examiner's combination of these references fails to render these claims obvious under 35 U.S.C. 103(a). According, applicants request withdrawal of the 35 U.S.C. 103(a) rejection of claims 1 and 7, and claims 2-6 and 8-12, that depend therefrom, respectively.

PAGE 7/8 * RCVD AT 12/26/2007 9:30:41 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/1 * DNIS:2738300 * CSID:609 734 6888 * DURATION (mm-ss):05-22

Conclusion

In view of the foregoing amendments to the claims and the accompany remarks, applicants solicit entry of this amendment and allowance of the claims. If, however, the Examiner believes such action cannot be taken, the Examiner is invited to contact the applicant's attorney at (609) 734-6820, so that a mutually convenient date and time for a telephonic interview may be scheduled.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's representatives Deposit Account No. **07-0832.**

Respectfully submitted,
Sebastian Weitbruch et al

By: Robert B. Levy
Reg. No. 28,234
Phone (609) 734-6820

Patent Operations
Thomson Licensing, Inc.
P.O. Box 5312
Princeton, New Jersey 08543-5312
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PAGE 8/8 * RCVD AT 12/26/2007 9:30:41 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/1 * DNIS:2738300 * CSID:609 734 6888 * DURATION (mm-ss):05-22 **